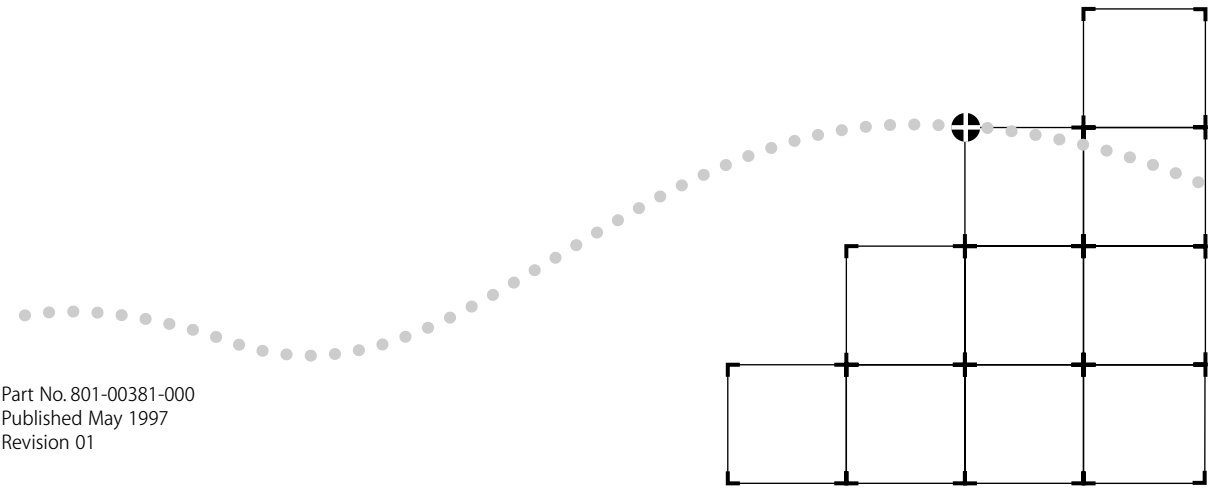
CoreBuilder™ 6000 Software Installation and Release Notes

CoreBuilder™ Intelligent Switching Software
Revision 8.2.0
May 8, 1997



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CoreBuilder 6000

Intelligent Switching Software

Revision 8.2.0

Overview

These installation instructions and release notes describe revision 8.2.0 of the CoreBuilder™ 6000 Intelligent Switching software from 3Com Corporation, dated May 8, 1997. This revision supersedes revision 8.0.2, dated December 2, 1996.

Extended Switching Software is also available. It supports IP, IPX, and AppleTalk routing, VLANs, and RMON. To purchase Extended Switching software, contact your sales representative.

Hardware Dependencies

CoreBuilder Intelligent Switching software revision 8.0.0 or greater requires that one of the following LANswitching Management Module Plus (LMM+) versions be installed in system slot 1:

- Revision 1.21 or greater of the revision 1 LMM+
- Revision 2.12 or greater of the revision 2 LMM+

If you attempt to run CoreBuilder system software 8.0.0 or greater on an earlier revision of the LMM+, the system fails to reboot automatically when you turn it on.

To reboot a system that has failed to reboot automatically, connect a terminal to the serial port on the LMM+ installed in the system. When asked if you want to "ignore the checksum error," enter **y** (**yes**). The system reboots.

Upgrading Your LMM or LMM+

To verify that you have an LMM+ module and not an LMM module installed:

1 Check that the module's ejector tab is labeled "LMM+".

2 Determine the revision of your LMM+. From the top level of the Administration Console, enter:

```
system display
```

If you have an LMM+ at a revision earlier than 1.21 (for revision 1 modules) or 2.12 (for revision 2 modules), call 3Com Customer Service at 1-800-876-3266, option 2. 3Com will replace your LMM+ with an LMM+ at the correct revision, free of charge. (Contact 3Com Customer Service at the same number to upgrade an LMM to an LMM+. There is a fee for this upgrade.)

Release Highlights

Release 8.2.0 software offers support for the following items:

- Fast Ethernet Switching Module (FESM)
- HSI Switch Engine
- Ability to administer Fast Ethernet ports
- Bridge MIB support for the FESM
- Filter MIB support
- FTP packet filter program transfers via SNMP
- Disconnecting an active telnet or rlogin session
- STP linkState changes
- CoreBuilder 6000 12-slot chassis

For more information about this release, see "What's New at Revision 8.2.0?" on page 11.

Before You Start

Before you install your new software, read all of these release notes. Carefully read "System Issues" on page 21 and "Known Problems" on page 22.

The top-level menus in your Administration Console may differ from those illustrated in these release notes depending on your level of access privilege and on the modules you have installed in your CoreBuilder chassis.

Updating Your System Software

You can install a new software version from any host that is running FTP server software. The system software is distributed for both the UNIX and the MS-DOS platforms.

The following media types are used to distribute compressed files for software releases:

- UNIX tar format 3 1/2-inch, double-sided, high-density 1.44 MB diskettes
- MS-DOS format 3 1/2-inch, double-sided, high-density 1.44 MB diskettes

To install or upgrade your system software, you must:

- Copy the software from the diskette to your UNIX or MS-DOS computer's hard disk.
- Decompress the software.
- Load the system software from your computer's hard disk to flash memory on the LMM+.

Details for these procedures are provided in the next sections.

Copying System Software to a Hard Disk

You can copy system software to a computer that runs either a UNIX or an MS-DOS operating system.

Copying to the UNIX Platform

The CoreBuilder software for a UNIX system is distributed on six diskettes. Diskettes #1, #2, #3, #4 and #5 contain the CoreBuilder software. Diskette #6 contains the SNMP MIBs.

To copy the software to a UNIX hard disk, follow these instructions.

If the directory "/usr/lp6000" does not exist on your computer, create the directory before proceeding. If your "/usr" directory is full, you can use a different directory. If you use a different directory, substitute the actual directory you use for "/usr" in this and subsequent procedures.

1. Insert diskette #1 into the disk drive. These instructions assume drive rfd0.
2. Extract the first part of the CoreBuilder software file using the following commands:

   ```
   # tar xvf /dev/rfd0
   ```

3. Remove diskette #1 using the following command:

   ```
   # eject
   ```

4. Insert diskette #2 into the disk drive and extract the second part of the file using the following command:

   ```
   # tar xvf /dev/rfd0
   ```

5. Remove diskette #2 using the following command:

   ```
   # eject
   ```

6. Insert diskette #3 into the disk drive and extract the third part of the file using the following command:

   ```
   # tar xvf /dev/rfd0
   ```

7. Remove diskette #3 using the following command:

   ```
   # eject
   ```

8. Insert diskette #4 into the disk drive and extract the fourth part of the file using the following command:

   ```
   # tar xvf /dev/rfd0
   ```

9. Remove diskette #4 using the following command:

   ```
   # eject
   ```

10. Insert diskette #5 into the disk drive and extract the fifth part of the file using the following command:

```
# tar xvf /dev/rfd0
```

11 Remove diskette #5 using the following command:

```
# eject
```

The following files should be in your /usr/lp6000 directory:

- `README1`
- `lp600000`
- `lp600001`
- `lp600002`
- `lp600003`
- `lp600004`
- `restore_lpx`

12 Use this script to decompress and restore the split file (`lp600000, lp600001, lp600002, lp600003, and lp600004`):

This procedure creates the uncompressed file . See the `README1` file for file size and checksum information.

Copying to the MS-DOS Platform

The CoreBuilder software for an MS-DOS system is distributed on four diskettes. This software must be installed using either the Windows 95 or the Windows NT operating system.

3Com recommends that you exit from all Windows programs before running this Setup program.

Installing on a Windows 95 or Windows NT Computer. To copy software to an MS-DOS host computer's hard disk using Windows 95 or Windows NT, take these steps:

1 Insert diskette #1 into a disk drive. These instructions assume drive a.

2 For Windows 95, click the Windows 95 START button and choose the Run command.

OR

For Windows NT, choose Run from the File menu.

The system displays the Setup screen, with the system software name, and the Setup dialog box.

3 At the command line in the Setup dialog box, enter **`a:setup`** and click *OK*.

A Welcome screen appears. The system prompts you to continue or to cancel the installation. To continue, click *Next*. To cancel the installation and exit the Setup program, click *Cancel*.

You are guided through the rest of the installation procedure by the Install Shield Wizard.

This procedure creates a file folder called `lp6000`, which contains:

- `IMAGE folder`
- `MIBS folder`
- `README.text`

Loading System Software on the LMM+

Before loading the system software on the LMM+, verify that the host computer, which has a copy of the updated system software, is connected to the CoreBuilder 6000 system.

You can load the system software into flash memory while the system is operating. You do not need to bring the system down. After the flash install is completed, a quick reboot puts the newly loaded software to use.

If you are loading software from a PC host, the FTP server software must be running on the PC before you begin this procedure.

Loading 8.2.0 software into flash memory takes approximately 10 to 15 minutes to complete, depending on your network load.

To load the new software:

1 From the top level of the Administration Console, enter:

```
system softwareUpdate
```

The system prompts you for the Host IP address, Install file name, User name, and Password. The current default values are displayed in brackets [ ]. Press [Return] to accept the default values. The Password field does not display what you enter.

2 Next to `Host IP address`, enter the IP address of the host machine (such as a Sun workstation or PC) from which you are installing the software.

In the example in step 5, the IP address of the host is **`192.9.200.96`**.

3 Next to `Install file pathname`, enter the complete path and filename.

For MS-DOS system syntax, you must precede the full path with a forward slash (/). For example, if you are loading software from an MS-DOS host, enter the following command at the `Install file pathname` *prompt:*

`/c:\lp6000\lp6000`

4 Next to `User name`, enter your user name.

5 Next to `Password`, enter your password. You *must* enter a value for this field, although the field does not display what you enter.

Example of the software installation prompts on a UNIX system:

```
Host IP address [192.9.200.14]: 192.9.200.96
Install file pathname [/usr/lp6000/lp6000]:
User name: ronnyk
Password:

Programming flash memory block 1 of 24...
Programming flash memory block 2 of 24...
Programming flash memory block 3 of 24...
.
.
.
Programming flash memory block 24 of 24...
```

After the software is loaded, you receive this message:

```
Installation complete.
```

If the CoreBuilder executable software image stored in flash memory is corrupted (for example, when a power failure occurs while you are updating software), contact 3Com Technical Support. See "Technical Support" on page 30.

6 To reboot the system to use the newly loaded software, enter:

`system reboot`

You are prompted with the following message:

```
Are you sure you want to reboot the system (y/n) [y]:
```

7 At the prompt, enter **`y`** for (yes).

You are now ready to configure management access for your system. See the *CoreBuilder 6000 Getting Started Guide*.

User Documentation

This version of software is compatible with the documentation listed here. Some of this documentation may be available on CD-ROM. These release notes describe any changes and additions to this documentation.

- *LANplex 6000 Getting Started*
- *LANplex 6000 Control Panel User Guide*
- *LANplex 6000 Operation Guide*
- *LANplex 6000 Administration Console User Guide*
- *LANplex 6000 Command Quick Reference* (folded card)
- *LANplex 6000 Extended Switching User Guide*

The Extended Switching User Guide ships with Extended Switching software.

Individual modules ship with their installation guides:

- *LMM Plus (LANswitching Management Module Plus) Installation Guide*
- *FCM (FDDI Concentrator Module) Installation Guide*
- *ESM (Ethernet Switching Module) Installation Guide*
- *EFSM (Ethernet/FDDI Switching Module) Installation Guide*
- *TRSM (Token Ring Switching Module) Installation Guide*
- *TMM Fast Ethernet (Tri-Media Module) Installation Guide*
- *FDDI Switching Module (FSM) Guide*
- *Fast Ethernet Switching Module (FESM) Guide*

What's New at Revision 8.2.0?

This section describes the new features, software enhancements, and corrections implemented at this release.

New Features

The following features have been added at this release.

Support for the Fast Ethernet Switching Module (FESM)

The Fast Ethernet Switching Module (FESM) provides high-function switching of traffic among Fast Ethernet workstations and subnetworks over the multigigabit high-speed interconnect (HSI) bus of the CoreBuilder 6000 system.

The FESM module is available in two configurations:

- Eight 100BASE-TX ports using RJ-45 connectors

  These ports support connections to unshielded twisted pair (UTP) Category 5 media.

- Six 100BASE-FX ports using SC connectors

  These ports support connections to multimode fiber media.

  The FESM automatically learns the MAC-layer addresses of workstations on attached subnetworks and forwards packets to their appropriate destinations. When used with CoreBuilder Extended Switching software, the FESM also supports routing between attached subnetworks. In addition, the FESM fully complies with the IEEE 802.1d bridging standard.

  The FESM requires CoreBuilder 6000 software revision 8.2.0 or greater. This software, in turn, requires that one of the following LMM+ versions be installed in system slot 1:

- Revision 1.21 or greater of the revision 1 LMM+
- Revision 2.12 or greater of the revision 2 LMM+

CAUTION: *If you attempt to run CoreBuilder system software 8.2.0 on an earlier revision of the LMM+, the system fails to reboot automatically when you turn it on.*

To verify that you have an LMM+ module and not an LMM module installed:

1 Check that the module's ejector tab is labeled "LMM+"

2 Determine the revision of your LMM+. From the top level of the Administration Console, enter:

```
system display
```

To upgrade your LMM or LMM+, see "Upgrading Your LMM or LMM+" on page 4.

HSI Switch Engine

You can combine the Fast Ethernet Switching Module (FESM) and FDDI Switching Module (FSM) into a multiboard *high-speed interconnect* (*HSI) switch engine*. An HSI switch engine is a combined set of FSMs or FESMs which, when inserted into the HSI bus according to specific configuration rules, operates as a single switch. Multiple FSMs and FESMs in a single HSI switch engine bridge the combined set of external ports on all modules in that switch engine. Additionally, as you add a new module to an existing HSI switch engine, the system automatically adds configuration information for the existing HSI switch engine to the new module. You must manually configure any port-specific information, however.

Ability to Administer Fast Ethernet Ports

New menus on the Administer menu allow you to administer Fast Ethernet ports on the Fast Ethernet Switching Module (FESM) and the Tri-Media Module (TMM-FE). You can now configure Fast Ethernet ports to support:

- Full-duplex operation
- Intelligent flow management (IFM)

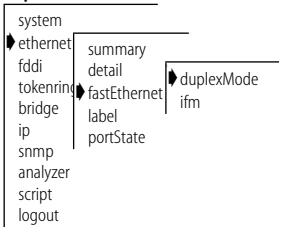
Full-duplex operation. By default, FESM and TMM Fast Ethernet ports operate in half-duplex mode. In this mode, data flows through the port in only one direction at a time. If you change this operating mode to `full-duplex`, the port transmits and receives data through two separate channels.

Full-duplex mode eliminates both the link's collision domain and the need for collision detection. As a result, full-duplex point-to-point links can be much longer than half-duplex links.

To configure a port for full-duplex operation:

The top-level menus in this chapter change based on you level of access and on the modules installed in your CoreBuilder system.

Top-Level Menu



1 From the top level of the Administration Console, enter:

```
ethernet fastEthernet duplexMode
```

You receive a prompt similar to the following:

```
Select slot(s) (10-12|all):
```

This prompt indicates that the CoreBuilder 6000 system contains configurable Fast Ethernet ports in slots 10, 11, and 12.

2 Enter the number(s) of the slot(s) that contain ports you want to set to full-duplex mode:

```
10-12
```

For each slot you entered, the system prompts you for specific port numbers:

```
Select Ethernet port(s) (1-8,all):
```

3 Enter the number(s) of the port(s) that you want to configure:

```
1,2,5-7
```

The system displays this message:

```
Warning: Changing mode to full duplex disables collision
detection. The device connected to this port must be
configured for the same duplex mode.
Do you want to change the duplex mode (n,y) [y]:
```

The CoreBuilder 6000 system does not support automatic negotiation of duplex mode between devices. You must configure any device attached to this port for the same duplex mode.

4 Enter **y** for yes, **n** for no.

You receive the prompt to select each port's duplex mode:

```
Enter new value (full, half) [half]:
```

5 Enter **`full`** to set the port to full-duplex mode or **`half`** to set the port to half-duplex mode.

Default The port's current setting is indicated within square brackets. To select this default, press [Return]. This action leaves the port unchanged.

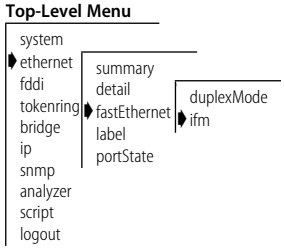
6 Repeat steps 4 and 5 to configure all the selected ports in all the selected slots.

Changing the mode to full-duplex disables collision detection on these ports.

Intelligent Flow Management (IFM). Intelligent flow management (IFM) is a congestion control mechanism built into the CoreBuilder system. You should implement IFM on any Fast Ethernet port that has a high volume of traffic. By default, IFM is *enabled* on CoreBuilder module ports.

Congestion is caused when one or more devices send traffic to an already congested port. If the port is connected to another CoreBuilder system or to an end-station, IFM minimizes packet loss and inhibits the sending device from generating more packets until the period of congestion ends.

Intelligent flow management is supported only on half-duplex ports. It is automatically disabled when a port is configured for full-duplex. 3Com recommends disabling IFM on network segments connected to repeaters.



To apply IFM to a half-duplex Fast Ethernet port:

From the top level of the Administration Console, enter:

```
ethernet fastEthernet ifm
```

You receive a prompt similar to the following:

```
Select slot(s) (10-12|all):
```

This prompt indicates that the CoreBuilder 6000 system contains configurable Fast Ethernet ports in slots 10, 11, and 12.

2 Enter the number(s) of the slot(s) that contain ports you want to set to IFM mode:

10-12

For each slot you entered, the system prompts you for specific port numbers:

```
Select Ethernet port(s) (1-8,all):
```

3 Enter the number(s) of the port(s) that you want to configure:

1,2,5-7

You receive the prompt to `enable` or `disable` IFM mode for each selected port:

```
Enter new value (disabled, enabled) [disabled]:
```

4 Enter **`enabled`** to set the port to IFM mode or **`disabled`** to deactivate IFM for the port.

Default The port's current setting is indicated within square brackets. To select this default, press [Return]. This action leaves the port unchanged.

5 Repeat step 4 to configure all the selected ports in all the selected slots.

Bridge MIB Support for the FESM

FESM support has been added to the Bridge MIB.

Filter MIB Support

Support for the Filter MIB (*address group, port group,* and *bridge packet filter program*) has been added.

FTP Packet Filter Program Transfers via SNMP

You can now use File Transfer Protocol (FTP) to transfer a user-defined packet filter program from a remote server to a CoreBuilder 6000 switching module through the SNMP lpsFtTable MIB.

Disconnecting an Active telnet or rlogin Session

Modifications to the telnet and rlogin features of the CoreBuilder 6000 system allow you to preempt users by forcing a disconnection. This administrative feature requires you to use the system Administer-level password at the Administration Console.

The rlogin usage is identical to the telnet usage. Substitute rlogin wherever you see telnet.

Implementation. When you attempt to use the telnet command to enter a system that is being used by another telnet connection, the system displays:

```
Sorry, this system is engaged by another telnet session.
Host IP address: xxx.xxx.xxx.xxx

Logout the other telnet session? (Y/N) y
Enter Password: administer-level-password
```

The first telnet session is disconnected and the system displays:

```
LOGGING OUT the other telnet session.
```

You can then connect in the usual manner.

If you enter an incorrect password, the system displays:

```
Incorrect password. Disconnecting.
```

The system automatically disconnects after it receives three incorrect attempts at the administer-level password.

If you respond **n** to the request to disconnect, your session disconnects and the original connection remains established. The system displays:

```
Disconnecting
```

CAUTION: *When you preempt a telnet or rlogin session in this manner, the current session user receives no notice that the session will be disconnected.*

If you enter **y** at the **Logout the other telnet session?** prompt and it is not accepted, it is probably because of the telnet configuration on the UNIX host. To force the system to accept your response to the prompt, follow these steps:

1 Escape to the telnet session by pressing **Ctrl+}**

2 Set the **cr/lf** option by entering either of these commands:

set crlf

OR

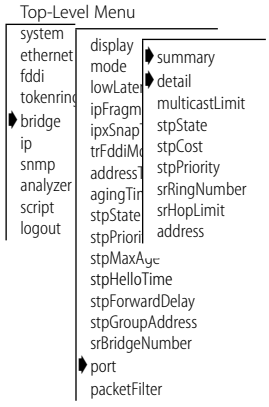
toggle crlf

Press Enter to redisplay the prompt. Your response should now be accepted.

STP linkState Changes

The **linkState** of a port is now a factor in determining the Spanning Tree port state. This change helps prevent bridge loops when making network connections to previously inactive ports.

The **bridge port summary** and the **bridge port detail** screens include a new **linkState** column.



To display the bridge information:

1 From the top level of the Administration Console, enter:

bridge port summary

OR

bridge port detail

The system prompts you for slot number(s).

2 Enter the number(s) of the slot(s) or **all** to view port parameters for all bridges in the system. The system prompts you for the port type.

3 Enter **Ethernet**.

The system prompts you for port number(s).

4 Enter the number(s) of the port(s) or **all** to view port parameters for all ports on the bridge.

Sample screen showing the display after the changes:

```
                port  rxFrames    rxDiscards          txFrames
           FDDI 1          0             0                 0
Fast  Ethernet 1          0             0                 0
     Ethernet 2   59243130             0         866810375
              ...        ...           ...               ...
                port                portId    fwdTransitions
           FDDI 1                   0x8001                 0
```

```
Fast  Ethernet  1                0x8002                0
      Ethernet  2                0x8003                0
                ...                 ...              ...
              port       stp     linkState           state
          FDDI  1    enabled          n/a      forwarding
Fast  Ethernet  1    enabled         down        disabled
      Ethernet  2    enabled           up      forwarding
```

Note these additional items:

- The linkState *up* or *down* applies to Ethernet and Fast Ethernet ports, not FDDI ports, and only when the **stpState** for the bridge is enabled. If the **stpState** on the Bridge menu is *disabled*, the **State** for the port remains in *forwarding* state.
- When the bridge port is in the *Removed* state, the **State** remains in *forwarding* state.
- If STP is *disabled* on an individual port, the **State** remains *disabled*.

Table 1 describes the port states and how they relate to the linkState. This table is valid only when the stpState for the bridge is *enabled*.

Table 1 Port States When **stpState** Is *Enabled*

If STP is	and linkState is	Then Port State is
enabled	up	blocking or forwarding*
enabled	down	disabled
disabled	up	disabled
disabled	down	disabled
removed	up	forwarding
removed	down	forwarding

*The Port State is either *blocking* or *forwarding*. The final state depends on the Spanning Tree configuration of the network.

CoreBuilder 6000 12-Slot Chassis

The CoreBuilder 6000 12-slot chassis is the latest generation of the CoreBuilder 6000 chassis. This chassis and the 8.2.0 software release allow you to remove and replace the power supplies and fan trays in case of failure.

Hot-swappable Power Supplies. You can remove and replace either of the two power supplies at the back of the chassis. Turning off one of the power supplies generates a sound, and the control panel LCD displays `Input Failure`. The LED of each power supply lights green when the power supply is running correctly. If the power supply fails, the system generates a sound and the power supply LED does not light.

To remove a faulty power supply and replace it with a new unit, follow these steps:

1. Turn off the power supply according to the safety and removal procedures in the Installation Guide that is shipped with the new power supply. The system control panel displays the following message (where *n* designates power supply 1 or power supply 2):

   `Power Supply n: Input Failure`

2. Remove the power supply. The system generates a sound, and the system control panel displays the following message:

   `Power supply n extracted.`

3. Insert the new power supply, following the instructions and safety warnings in the Installation Guide that comes with the new power supply. The system displays this message:

   `Inserted`

   This message is immediately overwritten with:

   `Input Failure`

4. Turn on the power supply. The system generates a sound and the system control panel displays:

   `Input restored`

Power Supply Warning Messages. This release of system software now displays these power supply warning messages when appropriate:

- `+5V Failure`

  The power supply +5-volt input has failed.

- `+12V Failure`

  The power supply +12-volt input has failed.

- `+12V Restored`

  The power supply +12-volt input is restored.

- `+5V Restored`

  The power supply +5-volt input is restored.

- `Power Supply Over Temp`

  One of the power supplies has exceeded the allowable temperature of 90 degrees C.

SNMP Traps. When you insert and extract either of the power supplies, the system generates SNMP traps.

Hot-swappable Fans. You can remove and replace either of the two fans at the back of the chassis. When you remove a fan tray, the system generates a sound and the control panel displays the following message:

```
Fan Failure
```

Insert the new fan following the instructions and safety messages in the Installation Guide that comes with the new fan. The fan begins to function immediately after you install it. The system control panel displays this message:

```
Fan Restored
```

System Issues

The following system issues are identified at this release:

- If the FESM diagnostic fails on a system power-up, the error message you find will look similar to the following message. You then need to reboot the system.

```
FAIL
   -- Test[ 3 ]:  FSM/FESM Powerup Diags ( MAC Test )
failed.
   -- B3 in slot 10 FAILED diagnostics
   Diagmgr    : Diagnostics failed for slot 10, error 2
```

- The system software does not support hot-swapping of Fast Ethernet Switching Module (FESMs) and FDDI Switching Modules (FSMs).
- 3Com recommends that you hot-swap one module at a time (except FESMs and FSMs, as described in the previous System Issue). After you hot-swap a module, wait until the system completes full initialization before you install another module. One indication that initialization is complete is that the Administration Console prompt appears on the screen. Under certain circumstances, hot-swapping during initialization can cause a cold system boot, disrupting bridging.
- Roving Analysis is not supported on the FESM.
- When configuring Roving Analysis on an ESM, the system will accept an unknown MAC address as the analyzer port.
- The first line in a user-defined packet filter must contain the name definition for that packet filter. For example:
  `Name "forward IP frames"`
  indicates that this packet filter forwards IP frames.

- When installing 8.2.0 Intelligent software onto a LMM+ running 8.2.1 Extended software, and non-IP VLANs are defined, you must reset non-volatile ram immediately after installing the 8.2.0 Intelligent software into flash memory. Please enter the following command immediately after the message `Installation complete` is displayed to the console:

  `system nvdata reset`

- When the first FDDI MAC address of an FSM is assigned to the backplane, FDDI ports are renumbered.
- EFSM packet filters can access packet data through byte 64 in the packet.
- When using the Administration Console to display all instances of a given MAC address in a mixed token ring and Ethernet environment, you must use the **`find`** command for both the noncanonical and canonical formats.
- If you attempt to run CoreBuilder system software 8.2.0 on an LMM+ at revision 2.11 or earlier, the system fails to reboot automatically when you turn it on.
- The Ethernet Switching Module (ESM) and the Token Ring Switching Module (TRSM) incorrectly report transmit filter statistics.
- The ESM and TRSM FDDI packet filters cannot access packet data beyond byte 16 in the packet.
- VLAN statistics are not supported on the ESM.
- The ESM only supports RMON groups 1 through 4.

Known Problems

The following software problems are identified at this release:

- Do not create port groups and port group filters on the FESMs or FSMs.
- The FESM and TMM-FE rxFrames, txFrames, rxBytes, and txBytes statistics might report inaccurate values.
- The FESM FDDI MAC rxFrames, txFrames, rxBytes, and txBytes statistics might report inaccurate values.
- If you attempt a warm reset, a cold reset may occur.
- The system `nvData save` procedure fails if it occurs at the same instant when a MAC address is learned or aged out of the slot's MAC address table.

- The NVRAM conversion for SNMP traps does not adjust correctly after installing LANplex software revision 8.2.1, verify that the appropriate traps are enabled.
- An NVDATA save procedure fails if it occurs at the same instant when a MAC address is learned or aged out of the slot's MAC address table.
- Performing a manual system `nvData restore` causes configurations to be restored to slots that have been specified *not* to restore.

  When you are restoring `nvData`, the system proposes a method of restoration based on restoration rules. You are prompted to load the proposal. Entering **`yes`** restores the system `nvData` as proposed. Entering **`no`** displays the saved configuration for you to load manually.
- Changing the port speed or port mode before setting a system baseline on the TRSM might cause incorrect token ring port and bridge port statistics.
- If both the Ethernet and the FDDI interfaces have the same class of IP address, their subnet masks must be the same, although the Administration Console allows you to enter different subnet masks for these interfaces. If you do enter different subnet masks, however, the system fails when you attempt to remove one of the interfaces.

  In the following example, the FDDI and the Ethernet interfaces both have class B IP addresses, and both have the same subnet mask:

  FDDI interface **`158.101.101.1`** Subnet mask: **`255.255.0.0`**
  Ethernet interface: **`158.101.20.1`** Subnet mask: **`255.255.0.0`**

  Do not assign different subnet masks to these interfaces (such as **`255.255.255.0`** and **`255.255.0.0`**) if they have the same class of IP address.
- Some bridge port statistics are not counted on the TRSM's token ring ports. The following statistics report 0 in the bridge port display for token ring ports on the TRSM - rxDiscard, rxFloodUcasts, rxForwardMcasts, rxForwardUcasts.
- When running large scripts, you might receive the following message after the script is complete:

  ```
  Received ftpCommand Quit not completed errno 421
  ```

  To be sure that the script has run completely and successfully, check to see that the last two commands in the script have been completed successfully.

- You cannot modify the port specification of an IP interface defined on the LMM+ module. To modify the port specification, remove the IP interface and define it again.
- When you install software using the SNMP lpsFt MIB, the installation fails unless you specify a user password.
- When you install software from an unreachable device using the SNMP lpsFt MIB, the system reports the incorrect status "statusFileNotFound", rather than the correct status "statusRemoteUnreachable".
- When you install software using the SNMP lpsFt MIB and you specify an invalid username and password pair, the system reports the incorrect status "statusFileNotFound", rather than the correct status "statusUserAuthFailed".
- ESM Arp table displays invalid hardware address.

SNMP MIB Files

SNMP MIB files are shipped with the CoreBuilder system software as ASN.1 files on one of the software diskettes. Copies of ASN.1 files are provided for each of the supported compilers described at the end of this section.

Supported Versions

The SNMP MIB file names and the currently supported version of each MIB are listed here:

- bridge.mib — Bridge MIB, RFC 1493
- ethernet.mib — Ethernet MIB, RFC 1398
- filter.mib
- if.mib — If MIB, RFC 1573
  - lpsFt.mib
- fddiSmt7.mib — FDDI SMT 7.3 MIB, RFC 1512
- lp.mib — CoreBuilder Systems MIB, version 1.3.0
- lpOpFddi.mib — CoreBuilder Optional FDDI MIB, version 1.2.1
- mib2.mib — MIB-II, RFC 1213
- srbridge.mib —Source Routing MIB RFC1525

Compiler Support

ASN.1 MIB files are provided for each of the MIB compilers listed in this section. Any warnings or exceptions related to a compiler are listed with it.

- SMIC (version 1.0.9)
- MOSY (version 7.1)

  For the MIB file *lpOpFddi.mib*, the MOSY compiler reports warnings for counter names that do not end in "s". This report has no effect on the output produced by the MOSY compiler.
- HP Openview (version 3.1)

- mib2schema (with SunNet Manager version 2.0)

  The MIB file *fddiSmt7.mib* produces the following warning messages when compiled using mib2schema:

```
Translating....

Warning: The following INDEX entries in
fddimibMACCountersTable not resolved:

fddimibMACSMTIndex
fddimibMACIndex
Translation Complete.
Schema file in “fddiSmt7.mib.schema”
Oid file in “fddiSmt7.mib.oid”
```

  These warning messages have no effect on the ability of SunNet Manager to use the schema file generated with SunNet Manager versions 2.0 or later.

Revision History

Table 2 provides a brief description of the previous releases of the CoreBuilder 6000 Intelligent Switching software.

Table 2 Revision History for CoreBuilder™ 6000 Intelligent Switching Software

Revision Number	Description of Release
8.0.2	Updated system diagnostics
8.0.1	Fixes for several problems that existed in Revision 8.0.0
8.0.0	New features: ■ Support for the FDDI Switching Module (FSM) ■ Support for the EFSM TP-DDI Module ■ *State* field added to interface display ■ System menu item *upTime* added ■ New FDDI MAC statistic *rxErrors* ■ New fields added to FDDI MAC summary and detail displays ■ Configurable Source Route hop count limit ■ CoreBuilder MIB support updates ■ Bridge MIB support added for the FSM ■ New If MIB added
7.0.0	New features: ■ Support for the Tri-Media Module (TMM) ■ Support for the IBM Spanning Tree Protocol on the Token Ring Switching Module (TRSM) ■ Support for configuring the Spanning Tree Protocol (STP) group address ■ Support for token ring and Source Routing MIBs ■ Support for telnet and rlogin session termination after a user-specified time interval ■ Support for 64 IP static routes on each EFSM
6.0.0	New feature: ■ Support for the Token Ring Switching Module (TRSM)

(continued)

Table 2 Revision History for CoreBuilder™ 6000 Intelligent Switching Software

Revision Number	Description of Release
5.0.0	New feature: ■ Support for LMM+ management module
4.3.0	New features: ■ UDP Helper ■ IPX Snap Translation Option ■ Support for EFSM Type 1, 10BASE-2 (BNC) module ■ Support for EFSM Type 2, 10BASE-T (RJ-45) and 10BASE-FL (FOIRL) modules with SAS FDDI (MIC) ports ■ Support for Single Mode Fiber (SMF) on the FCM module ■ Support for the 48-volt power supply
4.1.0	New features: ■ Support for EFSM Type 1, 10 BASE-T (RJ-21, Telco), 10BASE-T (RJ-45), and 10BASE-FL (FOIRL) ■ Roving Analysis for Ethernet network monitoring on the ESM and EFSM modules ■ Support for Multiple SNMP Agents ■ Multistation Mode ■ FDDI Backplane Paths ■ Enhanced *Administration Console User Guide*
3.1.9	Maintenance release
3.1.7	Maintenance release MIB support removed: ■ Ethernet MIB attributes, *requestedEnabledPaths* and *enabledPaths,* no longer supported ■ CoreBuilder SNMP MIB traps, *lpBridgePortAddressLearnedEvent* and *lpBridgePortAddressForgottenEvent,* no longer supported
3.1.5	New feature: ■ Support for the SMT MIB path attribute *Ring Latency*

(continued)

Table 2 Revision History for CoreBuilder™ 6000 Intelligent Switching Software

Revision Number	Description of Release
3.1.4	New features: ■ ESM 10BASE-2 (BNC) media support ■ IP advertisement address configuration support
3.1.1	New features: ■ IP routing functionality ■ TP-DDI media support ■ Nonvolatile data save and restore functionality
3.0.1	New feature: ■ Baselining of Ethernet and FDDI statistics functionality

Technical Support

3Com provides easy access to technical support information through a variety of services. This appendix describes these services.

Information contained in this document is correct at time of publication. For the very latest, we recommend that you access 3Com Corporation's World Wide Web site as described below.

Support from Your Network Supplier

If additional assistance is required, contact your network supplier. Many suppliers are authorized 3Com service partners who are qualified to provide a variety of services, including network planning, installation, hardware maintenance, application training, and support services.

When you contact your network supplier for assistance, have the following information ready:

- Diagnostic error messages
- A list of system hardware and software, including revision levels
- Details about recent configuration changes, if applicable

If you are unable to contact your network supplier, see the following section on how to contact 3Com.

Support from 3Com

If you are unable to receive support from your network supplier, technical support contracts are available from 3Com.

Contact your local 3Com sales office to find your authorized service provider using one of these numbers:

Regional Sales Office	Telephone Number
3Com Corporation	
U.S.	800 NET 3Com *or* 1 408 764 5000
3Com ANZA	
East	61 2 9937 5000
West	61 3 9866 8022
3Com Asia Limited	
China	86 10 68492 568 (Beijing) 86 21 6374 0220 Ext 6115 (Shanghai)
Hong Kong	852 2501 1111
India	91 11 644 3974
Indonesia	62 21 523 9181
Korea	82 2 319 4711
Malaysia	60 3 732 7910
Singapore	65 538 9368
Taiwan	886 2 377 5850
Thailand	662 231 8151 4
3Com Benelux B.V.	
Belgium	32 725 0202
Netherlands	31 30 6029700
3Com Canada	
Calgary	403 265 3266
Montreal	514 683 3266
Ottawa	613 566 7055
Toronto	416 498 3266
Vancouver	604 434 3266
3Com France	33 1 69 86 68 00
3Com GmbH	
Austria	43 1 5134323
Czech and Slovak Republics	42 2 21845 800
Germany	49 30 3498790 (Berlin) 49 89 627320 (Munich)
Hungary	36 1 250 83 41
Poland	48 22 6451351
Switzerland	41 31 996 14 14

Regional Sales Office	Telephone Number
3Com Ireland	353 1 820 7077
3Com Japan	81 3 3345 7251
3Com Latin America	
Argentina	54 1 312 3266
Brazil	55 11 546 0869
Chile	56 2 633 9242
Colombia	57 1 629 4110
Mexico	52 5 520 7841
Peru	51 1 221 5399
Venezuela	58 2 953 8122
3Com Mediterraneo	
Italy	39 2 253011 (Milan) 39 6 5279941 (Rome)
3Com Middle East	971 4 349049
3Com Nordic AB	
Denmark	45 39 27 85 00
Finland	358 0 435 420 67
Norway	47 22 18 40 03
Sweden	46 8 632 56 00
3Com Russia	007 095 2580940
3Com South Africa	27 11 807 4397
3Com UK Limited	44 131 2478558 (Edinburgh) 44 161 8737717 (Manchester) 44 1628 897000 (Marlow)

Returning Products for Repair

Before you send a product directly to 3Com for repair, you must first obtain a Return Materials Authorization (RMA) number. Products sent to 3Com without RMA numbers will be returned to the sender unopened, at the sender's expense.

To obtain an RMA number, call or fax:

Country	Telephone Number	Fax Number
U.S.A. and Canada	1 800 876 3266, option 2	408 764 7120
Latin America	1 408 326 7801	408 764 7120
Europe, South Africa and Middle East	44 1442 438125	44 1442 435822
Outside Europe, U.S.A., Canada, and Latin America	1 408 326 7804	1 408 764 7120